

Abstract Of The Disclosure

A sensor element for determining the concentration of a gas component in a gas mixture, particularly for determining the oxygen concentration in exhaust gases of internal combustion engines. The sensor element includes at least one pump cell, which has at least one first pump electrode located in a measuring gas chamber and at least one second pump electrode, located on a surface of the sensor element facing the gas mixture, as well as at least one concentration cell, which has at least one reference electrode located in a reference gas chamber and at least one measuring electrode, located in the measuring gas chamber, which cooperates with the reference electrode. The measuring gas chamber and the reference gas chamber are essentially located in the same layer level (plane) of the sensor element which has a layered construction. At least one barrier layer is provided which, at least to a large extent, prevents ionic conduction between at least one electrode of the pump cell and at least one electrode of the concentration cell.